WHAT WE CLAIM IS:

1. A process for alleviating the symptoms of a pulmonary disorder in a mammal, comprising administration early in the onset of the disorder of an effective amount of a factor selected from the group consisting of an apoptosis inhibitor and a survival factor to the pulmonary system of a mammal to alleviate a pulmonary disorder or symptoms thereof.

2. A process according to claim 1, wherein said factor is administered by systemic gene therapy.

3. A process according to claim 1, wherein said factor is administered by cell based gene therapy.

4. A process according to any one of claims 1 to 3, wherein said factor is administered with a pharmaceutically acceptable excipient.

5. A process according to any one of claims 1 to 4, wherein said pulmonary disorder is pulmonary hypertension.

6. A process according to any one of claims 1 to 5, wherein said factor is delivered using viable, transfected mammalian cells, said transfected mammalian cells containing at least one expressible trans-gene coding for an apoptosis inhibitor.

7. A process according to claim 5 wherein the mammalian cells are selected from the group consisting of dermal fibroblasts, smooth muscle cells, progenitor cells, endothelial progenitor cells, epithelial progenitor cells, smooth muscle progenitor cells, stem cells, and endothelial cells.

8. A process according to any one of claims 1 to 7 wherein said factor is selected from the group consisting of Z-Asp, Z-VAD, VEGF, Bcl-2, Bcl-xL, acetyl-DEVD-aldehyde inhibitor, acetyl-YVAD-aldehyde, acetyl-YVAD-chloromethylketone, Boc-D-(benzyl) chloromethylketone, crmA, $Zn^{2+}$, aurintricarboxylic acid, cytochalasin B, NO, eNOS, nNOS, iNOS, NO-donor compounds, ANG1, Akt, AIP, and BMP (bone morphogenetic protein).

9. A process according to claim 8 wherein the factor is Z-Asp.

10. A process according to claim 8 wherein the factor is Z-VAD.

11. A process according to claim 8 wherein the factor is VEGF.

12. A process according to claim 8 wherein the factor is ANG1.

13. A process according to claim 3 wherein the factor is selected from the group consisting of VEGF, eNOS, iNOS, nNOS, NO-donor compounds, NO, and ANG1.

14. A process as claimed any one of claims 1 to 13, wherein said mammal is human.

15. A process for preventing symptoms of a pulmonary disorder in a mammal, comprising administration of a factor selected from the group consisting of an apoptosis inhibitor and a survival factor to the pulmonary system of a mammal to prevent a pulmonary disorder or symptoms thereof.

16. A process according to claim 1, wherein said factor is administered by systemic gene therapy.

17. A process according to claim 1, wherein said factor is administered by cell based gene therapy.

18. A process according to any one of claims 15 to 17, wherein said pulmonary disorder is pulmonary hypertension.

19. A process according to claim 17 or 18, wherein said factor is delivered using viable, transfected mammalian cells, said transfected mammalian cells containing at least one expressible trans-gene coding for an apoptosis inhibitor.

20. A process according to claim 19 wherein the mammalian cells are selected from the group consisting of dermal fibroblasts, smooth muscle cells, progenitor cells, stem cells, or endothelial cells.

21. A process according to any one of claims 15 to 20, wherein the factor is selected from the group consisting of Z-Asp, Z-VAD, VEGF, Bcl-2, Bcl-xL, acetyl-DEVD-aldehyde inhibitor , acetyl-YVAD-aldehyde, acetyl-YVAD-chloromethylketone, Boc-D-(benzyl) chloromethylketone, crmA , $Zn^{2+}$, aurintricarboxylic acid, cytochalasin B, NO, eNOS, iNOS, nNOS, NO-donor

compounds, ANG1, Akt, AIP, and BMP (bone morphogenetic protein).

22. An apoptosis inhibitor useful for administration to a mammalian patient's pulmonary system to alleviate the symptoms of a pulmonary disorder in said patient.

23. A process for early diagnosis of a pulmonary disorder in a mammal, comprising assessing apoptosis in the pulmonary system of a mammal, wherein apoptosis is indicative of early onset of said pulmonary disorder.

24. A process according to claim 23, wherein said pulmonary disorder is pulmonary hypertension.

25. A process according to claim 23 or 24, wherein said assessing is carried out by caspase immunoreactivity assessment.

26. A kit for alleviating the symptoms of a pulmonary disorder in a mammal, comprising an effective amount of a factor selected from the group consisting of an apoptosis inhibitor and a survival factor of the pulmonary system and instructions for the administration thereof thereof.

27. A kit according to claim 26, wherein said instructions describe administration by systemic gene therapy.

28. A kit according to claim 26, wherein said instructions describe administration by cell based gene therapy.

29. A kit according to claim 26, further comprising a pharmaceutically acceptable excipient.

30. A kit according to claim 26, wherein said instructions describe administration using viable, transfected mammalian cells, said transfected mammalian cells containing at least one expressible trans-gene coding for an apoptosis inhibitor.

31. A kit according to claim 30, wherein said mammalian cells are selected from the group consisting of dermal fibroblasts, smooth muscle cells, progenitor cells, endothelial progenitor cells, epithelial progenitor cells, smooth muscle progenitor cells, stem cells, and endothelial cells.

32. A kit according to any one of claims 26 to 31, wherein said factor is selected from the group consisting of Z-Asp, Z-VAD, VEGF, Bcl-2, Bcl-xL, acetyl-DEVD-aldehyde inhibitor, acetyl-

YVAD-aldehyde, acetyl-YVAD-chloromethylketone, Boc-D-(benzyl) chloromethylketone, crmA, $Zn^{2+}$, aurintricarboxylic acid, cytochalasin B, NO, eNOS, nNOS, iNOS, NO-donor compounds, ANG1, Akt, AIP, and BMP (bone *morphogenetic protein*).